

Notes on a Small Collection of Orthoptera from the Lesser Antilles, with the Description of a New Species of *Orphulella*.

BY JAMES A. G. REHN.

(Plate VIII.)

The collection from which the following notes were made was transmitted to the author by Mr. H. A. Ballou, Entomologist of the Imperial Department of Agriculture for the British West Indies. The bulk of the material was presented to the Academy of Natural Sciences of Philadelphia, a small number of uniques and species confused under one number being returned to the Department.

With few exceptions the following records are the first from the islands represented, several South American forms being here recorded from the West Indies for the first.

On comparison with the lists of St. Vincent and Grenada Orthoptera published by Brunner and Redtenbacher,* the number of species is found to be much less as the material is much less extensive, twenty-eight in number, while the St. Vincent and Grenada papers list eighty-two, but of the twenty-eight forms here treated, thirteen are not contained in the two previous papers.

Probably the most striking fact noticed in studying this collection is that regarding the distribution of the two species of *Orphulella* here treated. The widely distributed *O. punctata* is represented by specimens from Dominica and St. Lucia, having also been recorded from Grenada, St. Vincent and Trinidad, while on Barbados it is apparently replaced by a quite distinct species, which, judging from the amount of material examined, is as abundant as *O. punctata* is in the localities where found.

Family FORFICULIDÆ.

ANISOLABIS Fieber.

Anisolabis maritima (Gené).

Barbados. September 13, 1901. (In seaweed; H. M. Le-

* Proc. Zoöl. Soc., London, 1892, pp. 196-221; 1893, pp. 599-611.

froy.) [No. G 363.] Five specimens ranging in size from small immature individuals to adults.

This species was taken in October under dead wood in St. Vincent.

Anisolabis janeirensis (Dohrn).

1864. *F[orcinella] Janeirensis* Dohrn, Entom. Zeit. Stettin, xxv, p. 285. [Rio de Janeiro, Brazil.]

Barbados. February 13, 1902. [No. 383.] One broken specimen. August 12, 1903. (Dr. Deane.) [No. 529.] One specimen. September 10, 1903. (H. A. Ballou.) One specimen.

Dominica. April 5, 1902. (Rotten wood.) One specimen.

This species has been recorded from St. Vincent, taken in January and October, under wood and leaves and in fruit.

One specimen examined (September 10, 1903) has the tegmina decidedly elongate and lateral, instead of broad and separated mesad by a slight space. This may be due to the specimen not having quite reached the imago state.

Family BLATTIDÆ.

ISCHNOPTERA Burmeister.

Ischnoptera occidentalis Saussure.

1862. *I[schnoptera] occidentalis* Saussure, Revue et Magasin de Zoologie, 2e ser., xiv, p. 170. [New Orleans.*]

Barbados. July 10, 1903. (H. A. Ballou.) [No. 213.] Three specimens.

Dominica. (H. M. Lefroy.) [No. G 213.] One specimen.

This species has previously been recorded from Grenada, San Domingo, Mexico, Peru and the type locality.

BLATTELLA Caudell.

Blattella supellectilium (Serville).

Barbados. November 5, 1901 (one). (H. M. Lefroy.) [No. G 107.] Two males. Bay Mansion. July, 1903. (H. A. Ballou.) [No. 560.] One female.

This species has previously been recorded in America from

* The original description simply gives "Nova" as the locality, but in the Mémoires (Mém. l'Hist. Nat. Mexiq., iv, p. 88) the locality New Orleans is indicated for the single specimen described.

southern Florida, Cuba, San Domingo, Jamaica, Porto Rico and Brazil.

Blattella conspersa (Brunner).

1865. *Ph[yllodromia] conspersa* Brunner, *Nouv. Syst. Blatt.*, p. 106. [Brazil].

Barbados. [No. G 408.] One male.

This specimen agrees very well with the original description of this species, except that the lines on the pronotum are not apparent, only small spots being present. The great number of fine blackish dots sprinkled over the tegmina appears to be diagnostic of the species.

CERATINOPTERA Brunner.

1865. *Ceratinoptera* Brunner, *Nouv. Syst. Blatt.*, pp. 46, 75.

Included *C. diaphana* (Fabricius), *picta*, *castanea* and *peruviana* Brunner, *payi* and *porcellana* Saussure. Of these *payi* and *porcellana* have been removed to *Plectoptera*, and *picta* has been selected as the type by Kirby.*

Ceratinoptera diaphana (Fabricius).

1793. [*Blatta*] *diaphana* Fabricius, *Ent. Syst.*, ii. p. 11. [Islands of equatorial America.]

Barbados. Easy Hall. September 24, 1902. (H. M. Le-froy.) [No. 560.] One female.

This species has previously been recorded from Cuba, Porto Rico, St. Thomas and Bermuda.

PERIPLANETA Burmeister.

Periplaneta americana (Linnæus).

Barbados. June, 1901 and October 18, 1902. [No. 163.] Three specimens.

Periplaneta australasiæ (Fabricius).

Barbados. February 12, July and December, 1903. [No. 163.] Three specimens.

CHORISONEURA Brunner.

Chorisonaura mysteca (Saussure)?

1862. *Bl[atta] mysteca* Saussure, *Revue et Magasin de Zoologie*, 2e ser., xiv, p. 167. [Tropical Mexico.]

Barbados. October, 1902. (Miss Field.) [No. 408.] One specimen.

* A Synonym. *Catal. Orth.*, i, p. 98, 1904.

This individual is referred to *mysteca* with some doubt. This species has been recorded from Grenada, as well as Bogota and several localities in Guatemala and Mexico.

LEUCOPHÆA Brunner.

Leucophæa maderæ (Fabricius).

Barbados. December 30, 1902, and September 26, 1902. [No. 108.] Three specimens.

This widely distributed tropical species has previously been recorded from St. Vincent.

PYCNOCELUS Scudder.

Pycnoscelus surinamensis (Linnæus).

Barbados. February, 1900. (H. M. Lefroy, in part.) [No. G 20 and G 153.] Four specimens.

One individual (G 153) is very pale and considerably shrivelled, a condition probably due to it having been captured when freshly transformed into the condition of the imago.

This tropical and subtropical species has been taken in Grenada and St. Vincent.

PANCHLORA Burmeister.

Panchlora virescens (Thunberg).

"*Blatta virescens* Thunberg, Mém. Acad. Sci. St. Petersb., x, p. 278."

Montserrat. January, 1904. (H. A. Ballou.) [No. 153.] One female.

This species has previously been recorded from Cuba, Porto Rico, Mexico, Cayenne and Brazil and questionably from Costa Rica.

Family MANTIDÆ.

MUSONIA Stal.

Musonia surinama (Saussure).

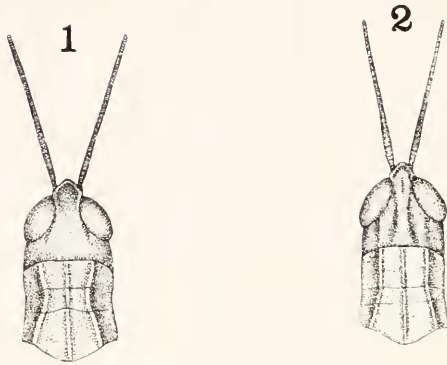
Barbados. Bay Mansion. December, 1903. [No. 102.] One male, one female. November 7, 1903. (H. A. Ballou.) [No. 600.] One male. (H. M. Lefroy.) [No. G 102.] Two males.

This species has previously been recorded from Grenada, St. Vincent, Trînidad, Surinam and Venezuela.

PARASTAGMATOPTERA Saussure.

1871. *Parastagmatoptera* Saussure, Mém. l'Hist. Nat. Mexiq., ii, pt. I, p. 83.

Type: *Mantis flavoguttata* Serville.



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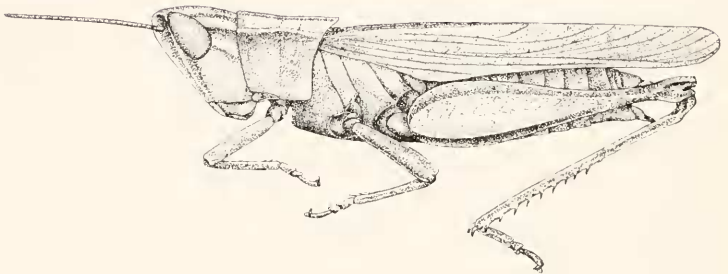


Fig. 1.—*Orphuella punctata* (De Geer). Female. Dominica. Dorsal view of head and pronotum. Fig. 2.—*Orphuella balloui* n. sp. Dorsal view of head and pronotum of female type. Fig. 3.—Lateral view of specimen represented in fig. 2 ($\times 3$).

Parastagmatoptera lobipes Redtenbacher.

1892. [*Parastagmatoptera*] *lobipes* Redtenbacher, Proc. Zoöl. Soc. London, 1892, p. 206, pl. xv, fig. 8. [South end, St. Vincent.]

St. Vincent. August 30, 1902. (T. W. Campbell.) [No. G 453.] One female.

This species was originally described from St. Vincent, and has since been recorded from Grenada.

Family PHASMIDÆ.

CLONISTRIA Stal.**Clonistria linearis** (Drury)?

St. Lucia. July, 1904. (H. H. Ballou.) [No. 622.] One male.

This species has been recorded from St. Vincent and Grenada, and the specimen listed above is placed here with a query, as true *linearis* (from Antigua) was very imperfectly described.

CALYNDA Stal.**Calynda keratosqueleton** (Olivier).

1762. *Mantis keratosqueleton* Olivier, Encyc. Method., Ins., vii, p. 639. [Based on Stoll; Surinam.]

Barbados. September and October, 1902. [No. 623.] Two females.

This species has never before been recorded definitely from any one of the West Indies, several authors having credited it to the islands as a whole. A closely allied form, *C. cyphus* (Westwood) has been recorded from St. Vincent and Grenada, but in the absence of a description of the female sex of that species, and the apparently close relationship to Stoll's figure,* I prefer to tentatively use a name based on the same sex as the material in hand.

Family ACRIDIDÆ.

ORPHULELLA Giglio-Tos.**Orphulella punctata** (De Geer). (Pl. viii, Fig. 1.)

St. Lucia. (No. 440.) One male, one female, one nymph.

Dominica: Middleham. November 25, 1891. (W. R. Elliot.) [No. 319.] One female.

* Natuurl. Afbeeld. Besch. Spoken, pl. xv, fig. 57.

Not separable from specimens from St. Vincent, Vera Cruz and Costa Rica. The species has previously been recorded from Grenada and St. Vincent, in the Lesser Antilles, as well as from Trinidad.

Orphulella balloui n. sp. (Pl. viii, Figs. 2 and 3).

Types: ♂ and ♀; Bay Estate, Barbados, West Indies, September 9, 1902 (♂) and September 30, 1902 (♀). (H. M. Lefroy.) [A. N. S. Phila.]

Allied to *O. punctata* (DeGeer) but differing in the slenderer form, the more retreating face, the narrower excavation of the fastigium, the longer eye, narrower costal expansion of the tegmina and the much slenderer caudal femora.

Size medium; form elongate, slender. Head with the occiput and vertex hardly rounded, the interspace between the eyes slightly less than the greatest width of the fastigium; fastigium acute in both sexes, the margins raised and cingulate, excavation limited to a narrow depression caudad of the margins in the female, the greater portion of the dorsal aspect of the fastigium depressed in the male and without any very distinct excavation; lateral foveolæ elongate trigonal; frontal costa strongly constricted dorsad, regularly and gradually expanding ventrad; lateral ocelli rather large, placed by the eye at the ventro-caudal angle of the lateral foveola; eye acute ovate, the apex directed dorso-cephalad, length over half again that of the infra-ocular portion of the genæ; antennæ depressed, subensiform, slightly shorter than the head and pronotum together. Pronotum slightly less than twice as long as the greatest dorsal width, slightly tectate, median and lateral carinæ distinct, the lateral parallel on about the cephalic half, slightly and gradually diverging on the caudal half; cephalic margin subtruncate, caudal margin obtuse-angulate; metazona slightly shorter than the prozona; lateral lobes with the ventro-caudal angle rectangulate. Tegmina elongate, considerably exceeding the apex of the abdomen and slightly exceeding the femora; apex rounded, costal expansion low. Interspace between the mesosternal lobes very distinctly (male) or slightly (female) longitudinal; interspace between the metasternal lobes very narrow and strongly longitudinal in the female, the lobes contiguous in the male. Cephalic and median limbs little inflated. Caudal femora slender, over four times as long as the greatest width, which is in the basal third, genicular region very slightly arched, lobes narrowly rounded; caudal tibiæ with eleven spines on the external and twelve on the internal margins.

General color varying from wood brown to russet, overlaid with the usual markings found in the brown phase of species of the genus; the male type having the base color buff on the head and pronotum. Postocular bars and rather weak longitudinal occipital bars bistre; eyes raw umber.

Pronotum with the lateral lobes marked dorsad with bistre in the male, all except a distinct bar of buff on the ventral portion of the lateral lobes being obscured. Tegmina of the general color, the anal areas lighter than discoidal in the male, maculations exceedingly faint in the female, and practically absent in the male. Caudal femora with the genicular arches burnt umber; ventral surface and the tips of the spines on the tibiae bistre.

MEASUREMENTS :

	♂		♀
Length of body,	15.	mm.	21.5 mm.
Length of pronotum,	3.	"	4.4 "
Greatest dorsal width of pronotum,	1.9	"	2.9 "
Length of tegmen,	14.	"	17.5 "
Length of caudal femur,	10.	"	12. "

A series of twenty-one Barbados specimens have been examined in addition to the types, taken in the months of January, August, September and October. Considerable variation is exhibited in the size of the females, two specimens particularly (Bay Estate, September 20 and 25, 1902) being little larger than males. The coloration exhibits the great range of variation noticed in the species of this genus, a distinct green phase being contained in the collection and represented by two specimens, one of each sex. Some females are extremely dark colored, which condition is also found in *O. punctata*, while others are quite pale.

This species can readily be separated from *O. punctata* by the characters given in the diagnosis, the more appreciable being the more retreating face and the slenderer caudal femora.

I take pleasure in dedicating this species to Mr. H. A. Ballou, Entomologist to the Imperial Department of Agriculture for the West Indies, through whose kindness I received the present collection for study.

SCHISTOCERCA Stal.**Schistocerca pallens** (Thunberg).

Barbados. November 15, 1902, and June 2, 1903. [No. 10.]
One male, three females.

These specimens have the tegmina more pantherine than in Cuban specimens of this species which have been examined in this connection, but they are no doubt the same.

This species has been recorded from Cuba, Hayti, Jamaica and St. Vincent in the Antilles.

Family TETTIGONIDÆ.

TURPILIA Stal.

1874. *Turpilia* Stal, Recensio Orthopterorum, ii, p. 16, 31.

Type: *T. punctata* Stal.

Turpilia punctata Stal.

1874. *Turpilia punctata* Stal, Recensio Orthopterorum, ii, p. 31.
[Island of St. Bartholomew.]

Dominica. October, 1901. (H. M. Lefroy.) [No. 221.]
One female.

Montserrat. August, 1901 (on lime tree). (H. M. Lefroy.)
[No. 221.] One female.

This species has previously been recorded only from the type locality.

XEROPHYLLOPTERYX * new name.

1895. *Xeropteryx* Brunner, Monographie der Pseudophylliden, p. 102. (Not of Butler, Journ. Linn. Soc., London, xvii, p. 203, 1883.)

Xerophyllopteryx fumosa (Brunner).

1895. *Xeropteryx fumosa* Brunner, Monographie der Pseudophylliden, p. 103, fig. 45. [South America; Guadeloupe.]

St. Lucia. February 25, 1902, and March, 1902. (H. M. Lefroy, in part.) [Nos. 223 and 405.] Three males, one female.

This species has not been recorded since the original description, and from the known localities would appear to have a rather wide distribution. Some variation is apparent in the size of the male individuals.

CONOCEPHALUS Thunberg.**Conocephalus obscurellus** Redtenbacher.

Barbados. (H. M. Lefroy, in part.) September 27, 1903. [No. 80.] Six males, nine females.

This series exhibits a great amount of variation in the intensity of the coloration, the size being quite constant. This species ranges from the Gulf States to Venezuela.

Conocephalus macropterus Redtenbacher.

Barbados. September 7, 1903. [No. 384.] Two females.

* ξηρος dry, φυλλας leaf, πτερυξ wing.